

CLAIMS:

1. An apparatus for displaying a lenticular image comprising a lenticular image sheet and a lenticular lens sheet, the apparatus comprising a housing adapted to receive the lenticular image sheet and lenticular lens sheet so as to allow relative sliding movement between the two in a direction substantially perpendicular to the longitudinal axes of lenses on the lens sheet, wherein the housing includes means for actuating said lenticular lens sheet with respect to the lenticular image sheet in said direction of movement.
2. An apparatus as claimed in Claim 1, wherein, at least during use, the image sheet is fixed with respect to the housing.
3. An apparatus as claimed in Claim 1 or 2, wherein the image sheet and the lens sheet are sandwiched between first and second plates, at least the plate which is adjacent the lens sheet being at least partially formed from a transparent material.
4. An apparatus as claimed in any preceding claim, wherein the housing comprises a first frame and a second frame operable between an open and a closed state, at least one of the frames defining a display window.
5. An apparatus as claimed in any preceding claim, wherein the housing is arranged to, in the closed state, urge the lens sheet and the image sheet towards one another in order to maintain an intimate relationship between the lens sheet and the image sheet.
6. An apparatus as claimed in Claim 5, wherein the housing is shaped to define a recess around the periphery of the or each display window, the recess being shaped and dimensioned to receive the periphery of the lens sheet and image sheet assembly.

7. An apparatus as claimed in Claim 6, wherein a flexible padding component is provided in said recess to urge the lens sheet and the image sheet towards one another when the housing is closed.

5 8. An apparatus as claimed in any preceding claim, wherein the actuating means comprises a rotary cam in operative association with at least one cam follower, such that rotation of the cam causes reciprocating movement of the at least one cam follower, the at least one cam follower being coupled to the lens sheet to impart reciprocating movement thereto.

10

9. An apparatus as claimed in Claim 8, wherein the actuating means includes at least one lever coupled to said at least one cam follower and to said lens sheet.

15

10. An apparatus as claimed in Claim 9, wherein said at least one lever is pivotable about a pivot axis located between the at least one cam follower and the coupling between the lever and the lens sheet.

20

11. An apparatus as claimed in Claim 10, wherein the at least one lever is selectable pivotable about one of a plurality of pivot axes, the pivot axes being spaced apart in a direction generally perpendicular with the plane in which the lens sheet lies during use.

25

12. An apparatus as claimed in any one of claims 8 to 11, wherein said at least one cam follower is carried by the lens sheet.

13. An apparatus as claimed in any one of Claims 8 to 12, wherein the lens sheet includes one or more lugs which, in use, project out of the housing, the actuating means being coupled to at least one of said one or more lugs.

14. An apparatus as claimed in Claim 13, wherein at least one lug projects from the housing in a direction generally parallel with the direction of movement of the lens sheet.
- 5 15. An apparatus as claimed in Claim 14 when dependent on any one of claims 9 to 11, wherein said at least one lug carries means for engaging with a portion of said at least one lever, said pivot axis being between said lever portion and said cam.
- 10 16. An apparatus as claimed in claim 15, wherein said engaging means comprises at least two locating members spaced-apart and receiving said lever portion therebetween.
- 15 17. An apparatus as claimed in Claim 15 or 16, wherein the location of said engaging means on said at least one lug is adjustable in a direction that is generally perpendicular with the direction of movement of the lens sheet and generally in or parallel with the plane in which the lens sheet lies.
- 20 18. An apparatus as claimed in Claim 14, wherein said at least one cam follower is carried by said at least one lug.
- 25 19. An apparatus as claimed in Claim 18, wherein said at least one lug carries two spaced apart cam followers, the cam being located, in use, between the cam followers.
20. An apparatus as claimed in Claim 18 or 19, wherein the cam surface of the cam is generally circular.
- 30 21. An apparatus as claimed any one of claims 18 to 20, wherein the follower surface of the or each cam follower is generally circular.

22. An apparatus as claimed in any one of Claims 18 to 21, wherein said cam is eccentrically mounted on its rotational axis.

23. An apparatus as claimed in any one of Claims 14 to 22, wherein said at least
5 one lug is supported by one or more bearings.

24. An apparatus as claimed in any one of Claims 14 to 23, wherein a single lug projects from a first side of the housing and is substantially centrally located on said first side.

10 25. An apparatus as claimed in Claim 24, wherein a single lug projects from a second side of the housing, the second side being opposite the first side.

26. An apparatus as claimed in Claim 23, wherein at least one of said bearings
15 rotatable about an axis and is eccentrically located with respect to said axis.

27. An apparatus as claimed in any preceding claim, wherein said actuating means comprises a rotatable member coupled to at least one lever, said at least one lever being coupled to the lens sheet to effect reciprocating movement of the
20 lens sheet upon rotation of the rotatable member.

28. An apparatus as claimed in Claim 27 when dependent on Claim 14, wherein said at least one lever is coupled to said at least one lug.

25 29. An apparatus as claimed in Claim 27, wherein at least one lug projects from the housing in a direction generally perpendicular with the direction of movement of the lens sheet and being generally coplanar with the lens sheet.

30 30. An apparatus as claimed in Claim 29, wherein said at least one lever is coupled to said at least one lug

31. An apparatus as claimed in Claim 29 or 30, wherein said at least one lug is associated with guide means in the form of a slot and pin assembly, one of the slot and pin being provided on said at least one lug, the other being carried by the housing.

5

32. An apparatus as claimed in Claim 31, wherein the position of said pin is adjustable in a direction generally perpendicular with the direction of movement of the lens sheet and generally in or parallel with the plane in which the lens sheet lies.

10

33. An apparatus as claimed in Claim 27, wherein said actuating means is located, in use, behind the image sheet.

34. An apparatus as claimed in Claim 33, wherein at least one lug projects from the housing in a direction generally parallel with the direction of movement of the lens sheet, said at least one lug carrying an arm extending generally rearwardly of the lens sheet, said at least one lever being coupled to the arm.

15

35. An apparatus as claimed in Claim 34, wherein said at least one lever carries spaced apart locating members for receiving the arm.

20

36. An apparatus as claimed in any one of Claims 8 to 17, wherein said cam comprises a constant rate rise and fall cam.

37. An apparatus as claimed in any preceding claim, wherein the cam is arranged for eccentric rotation about an axis.

25

38. An apparatus as claimed in any preceding claim, wherein the housing includes bearing means upon which the lens sheet slides during use.

30

39. An apparatus as claimed in any preceding claim, further including means for tilting the lens sheet about an axis generally perpendicular with the plane in which it lies.

5 40. An apparatus as claimed in Claim 39, wherein said tilting means comprises one or more support members which, in use, support the lens sheet, the position of or each support member being adjustable in a direction generally perpendicular with the direction of movement of the lens sheet and generally in or parallel with the plane in which the lens sheet lies.

10

41. An apparatus as claimed in any preceding claim, including means for retaining said lenticular image sheet in a fixed position relative to the housing.

42. A lenticular image display apparatus comprising the apparatus of Claim 1 and
15 an assembly comprising an image sheet and a lens sheet.